



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/501,253

06/09/2005

Matthias Franz

10191/3759

7516

26646

7590

09/20/2007

KENYON & KENYON LLP  
ONE BROADWAY  
NEW YORK, NY 10004

EXAMINER

RASHID, DAVID

ART UNIT

PAPER NUMBER

2624

NOTIFICATION DATE

DELIVERY MODE

09/20/2007

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

uspto@kenyon.com

**Office Action Summary**

Application No.

10/501,253

Applicant(s)

FRANZ, MATTHIAS

Examiner

David P. Rashid

Art Unit

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 11-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 July 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 7/8/2004.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

Art Unit: 2624

### DETAILED ACTION

All of the examiner's suggestions presented herein below have been assumed for examination purposes, unless otherwise noted.

#### *Amendments*

1. This office action is responsive to the claim and specification amendment received on 7/8/2004. **Claims 11 – 20** remain pending; **claims 1 – 10** are cancelled; **claims 11 – 20** are new.

#### *Priority*

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d) (Application # 102 01 552.8, filed 7/8/2004), which papers have been placed of record in the file.
3. As recited in the MPEP under 1893.03(c) section BENEFIT CLAIM UNDER 35 USC 119(e), OR 120 AND 365(c):

The national stage application must contain a reference to the prior nonprovisional or international application (either in an application data sheet (37 CFR 1.76 or in the first sentence(s) of the specification), identifying it by application number (series code and serial number) or international application number and international filing data and indicating the relationship of the applications. The required reference to the earlier filed application must be submitted within the later of four months from the date on which the national stage commenced under 35 USC 371(b) or (f) or sixteen months from the filing date of the prior-filed application.

4. It is advised to add the reference to the prior international application in the first sentence of the specification.

#### *Drawings*

5. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because of the following objections:

Art Unit: 2624

- (i) The following is a quote from 37 CFR 1.84(q):

Lead lines are those lines between the reference characters and the details referred to. Such lines may be straight or curved and should be as short as possible. They must originate in the immediate proximity of the reference character and extend to the feature indicated.

FIG. 1 (elements 1, 2, 3) is objected to under 37 CFR 1.84(q) for failing to properly use lead lines when needed – it is suggested to connect the elements to their respective features with a lead line.

- (ii) The following is a quote from 37 CFR 1.84(p)(3):

When necessary, such as indicating a surface or cross section, a reference character may be underlined and a blank space may be left in the hatching or shading where the character occurs so that it appears distinct.

FIG. 1 (elements 4, 5) is objected to under 37 CFR 1.84(p)(3) for failing to properly use underlining when needed – it is suggested to underline elements 4 and 5.

- (iii) The following is a quote from 37 C.F.R. 1.84(u)(1):

(1) The different views must be numbered in consecutive Arabic numerals, starting with 1, independent of the numbering of the sheets and, if possible, in the order in which they appear on the drawing sheet(s). Partial views intended to form one complete view, on one or several sheets, must be identified by the same number followed by a capital letter. View numbers must be preceded by the abbreviation "FIG." Where only a single view is used in an application to illustrate the claimed invention, it must not be numbered and the abbreviation "FIG." must not appear.

FIG. 2A through FIG. 4B are objected to under 37 C.F.R. 1.84(u)(1) for failing to completely capitalize the partial view numbers – it is suggested to capitalize (e.g. "FIG. 2a" to "FIG. 2A").

6. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Art Unit: 2624

7. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### *Specification*

8. The following is a quote from 37 CFR 1.72:

(b) A brief abstract of the technical disclosure in the specification must commence on a separate sheet, preferably following the claims, under the heading "Abstract" or "Abstract of the Disclosure." The sheet or sheets presenting the abstract may not include other parts of the application or other material. The abstract in an application filed under 35 U.S.C. 111 may not exceed 150 words in length. The purpose of the abstract is to enable the United States Patent and Trademark Office and the public generally to determine quickly from a cursory inspection the nature and gist of the technical disclosure.

9. It is noted that the abstract contains 48 words as it is suggested to keep between 50 and 150.

***Claim Rejections - 35 USC § 102***

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

11. **Claims 11 – 20** are rejected under 35 U.S.C. 102(b) as being anticipated by Stam et al.

(US 5,923,027 A).

Regarding **claim 11**, Stam discloses a method for recognizing a visual obstruction “moisture on a surface” in Col. 1, lines 8 – 12) using an image sensor (FIG. 1) associated with a vehicle (“vehicle’s windshield” in Col. 1, lines 8 – 12), comprising:

analyzing an image (FIG. 5, element 46) recorded by an image sensor, wherein at least one of a presence and a type of a visual obstruction (the presence of moisture/fog on the windshield; “Result” column in Table in Col. 11, lines 19 – 25) is determined by the analysis of the image (FIG. 5; FIG. 6), wherein the analysis includes measuring a blurriness (FIG. 5, elements, 48, 50, 52, 58, 64) of at least a portion of the image (a “portion” of the image is both taken in elements 46, 56 in FIG. 5);

producing a signal (“YES” and “NO” from element 52 in FIG. 5) which indicates one of the presence and the type of the visual obstruction (the presence of moisture/fog on the windshield; “Result” column in Table in Col. 11, lines 19 – 25).

Regarding **claim 12**, Stam discloses the method of claim 11, wherein the at least one of the presence and the type of the visual obstruction (the presence of moisture/fog on the windshield; “Result” column in Table in Col. 11, lines 19 – 25) is determined by measuring a relative blurriness of different parts (“EACH PIXEL” in element 48 of FIG. 5) of the image (FIG. 5, element 46).

Regarding **claim 13**, Stam discloses the method of claim 11, wherein the blurriness is measured based on one of a contrast spectrum of the image, a Fourier spectrum (“LAPLACIAN” in element 48 of FIG. 5; equation (1) being the Fourier also used), and a autocorrelation function of the image.

Regarding **claim 14**, Stam discloses the method of claims 11, wherein the at least one of the presence and the type of visual obstruction (the presence of moisture/fog on the windshield; “Result” column in Table in Col. 11, lines 19 – 25) is determined based on a measured distribution (“SUM THE RESULTS” in element 48 of FIG. 5) of the blurriness by comparison (FIG. 5, elements 50, 52) with reference distributions (“ZERO CALIBRATION” in element 50 of FIG. 5).

Regarding **claim 15**, Stam discloses the method of claim 11, wherein an analysis of at least one image recorded (FIG. 5, element 56) after an initial wiping operation (FIG. 5, element 54) on a windshield of a motor vehicle (“vehicle’s windshield” in Col. 1, lines 8 – 12) is used to determine whether to initiate a next wiping operation (“STORE AS CALIBRATION” in element 64 of FIG. 5 to be used again to actuate wipers in the future in element 54 of FIG. 5).

Regarding **claim 16**, Stam discloses the method of claim 15, wherein the determination regarding the next wiping operation (next wiping operation after initial loop from element 46 to

Art Unit: 2624

64 in FIG. 5 already occurred to produce new calibration data from element 64 in FIG. 5) is based on blurriness of a first image (“ACQUIRE IMAGE” in element 64 of FIG. 5 and creating the calibration data from it to be later used) that was recorded immediately after the initial wiping operation (FIG. 5, element 54) in comparison to blurriness of an image recorded subsequent (second loop from element 46 to 64 is now based off of new calibration (from element 64 of first loop) in elements 50, 52) to the first image .

Regarding **claim 17**, Stam discloses the method of claim 11, further comprising:

turning on a windshield light if a scene has a contrast below a predetermined threshold (Col. 9, lines 56 – 67 wherein the contrast is “dark conditions” as opposed to normal).

Regarding **claim 18**, Stam discloses the method of claim 11, wherein the image sensor (FIG. 2) is focused on a region external (FIG. 3, element 70; “Exterior Fog” in “Result” column in Table in Col. 11, lines 19 – 25) to the vehicle.

Regarding **claim 19**, claim 11 recites identical features as in claim 19. Thus, references/arguments equivalent to those presented above for claim 11 are equally applicable to claim 19.

Regarding **claim 20**, Stam discloses the device of claim 19, wherein the signal (“YES” signal from element 52 of FIG. 5) is used to control at least one of windshield wipers (FIG. 5, element 54), windshield heating systems, and windshield washer systems.

*Conclusion*

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David P. Rashid whose telephone number is (571) 270-1578. The examiner can normally be reached Monday - Friday 8:30 - 17:00 ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Werner can be reached on (571) 272-7401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David P. Rashid/  
Examiner, Art Unit 2624



BRIAN WERNER  
SUPERVISORY PATENT EXAMINER

David P Rashid  
Examiner  
Art Unit 2624